

collection of dried specimens, however, was secured for the Herbarium of the Colonial Museum, at Wellington, which will prove valuable for future reference. No. 2, pl. xxxviii., shows a characteristic outlier of the trachydolerite rock frequented by immense flocks of sea-fowl. No. 3, pl. xxxviii., is the best harbour in the Island, and a favourite anchorage for sealers.

ART. XLIV.—*On the Lichenographia of New Zealand.*

By CHARLES KNIGHT, F.L.S.

[Read before the Wellington Philosophical Society, 13th February, 1884.]

Plates XXXIX.—XLI.

1. *Pilophoron colensoi* (Bab.), Knight.

(Syn. *Stereocaulon colensoi* (Bab.), Flora N.Z., vol. ii., p. 294; Nylander, Synopsis Lich., p. 232.)

THALLUS cæspitosus e podetiis formatus. Podetia intus solida dense granulosa, strato corticali tenuissimo e gonidiis veris constante. Apothecia plura congesta capituliformia intus alba solida lecanorina,\* juvenilia crasse marginata; excipulo thallode albo, corticis structura radiatim disposita, gonidiis veris nullis. Sporæ in ascis cylindrico-elongatis octonæ uniseriales oblongo-ellipsoideæ simplices subluteolæ, longit. 0.009 mm., crassit 0.0025 mm. Cephalodia plura in apicibus ramorum brevium congesta, glaucocærulescentia, intus granulis gonimis flavo-viridis, in nodulis 2 ad 4 dispositis, omnino constantia.

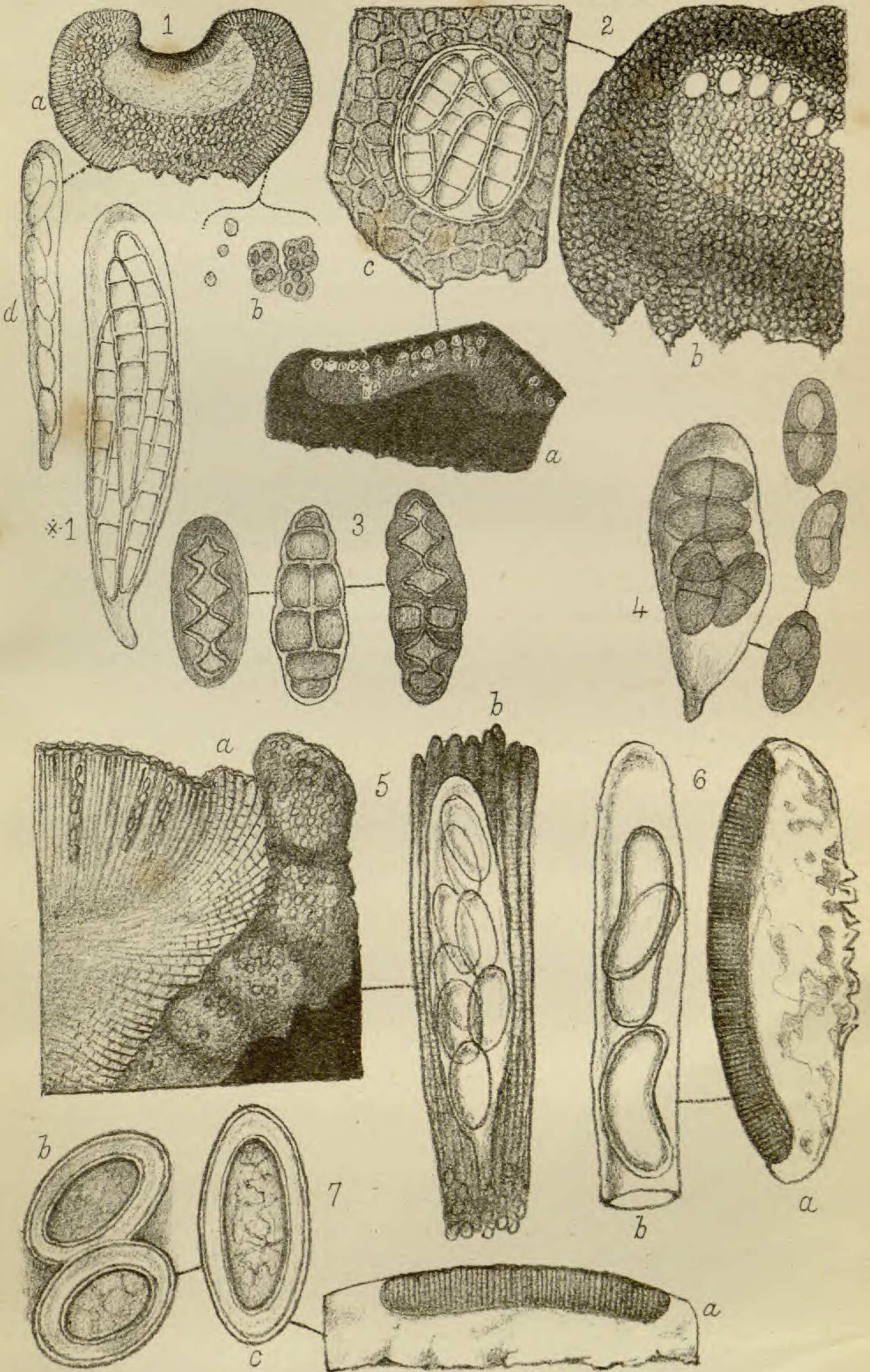
*Supra saxa.*

*Obs.*—The discovery of the spores, now shown to be simple, distinctly shows that Colenso's lichen belongs to the genus *Pilophoron*. Th. Mr. Fries, in his "Monogr. Stereocaulorum et Pilophororum," p. 66, under "*Species minus cognita*," remarks that *Stereocaulon colensoi* is perhaps a form of *Ster. argus*. This view must now be abandoned, as the latter plant has cylindrico-fusiform multiseptate spores (see fig. 1\*, pl. xxxix). Babington, on the other hand, considers it allied to *Ster. ramulosum*, but the same objection exists to any proposal which would place Colenso's plant under the genus *Stereocaulon*.

2. *Myriangium duricæi* (Mnt. et Berk.).

*Thallus nullus.* Apothecium tuberculiformis e matrice erumpens (diam. circiter 3 mm. vel amplius) toro crasso parenchymatico carbonizato marginatum; epithecium carbonizatum; hymenium parenchymaticum luteo-fuscum

\* Quia margo est thallinus, lecanorina nominatur.



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*multivesiculare*, vesiculis sparsis singulis ascum globosum singulum includentibus, paraphysibus nullis; hypothecium discretum nullum. Sporæ octonæ oblongæ utrinque obtusæ nonnihil incurvæ hyalinæ normaliter 3-septatæ, longit. 0.02 mm., crassit. 0.0075 mm.

*Ad cortices arborum.*

*Obs.*—The Rev. Churchill Babington in "Flora of New Zealand," p. 310, places under the head of *Myriangium inconspicuum* a lichen which Dr. Nylander has since shown to be an *Arthonia* allied to *Arth. lurida* and has named *Arth. conspicua* (see Nylander's *Lich. Novo-Granatense*, note, p. 67, 1st ed.). Babington in his remarks does not seem to be aware that there exists in New Zealand a true *Myriangium*, viz., *Myr. duriei*, a perfectly developed species of that very curious genus.

### 3. *Physcia adglutinata*, Flk.

Thallus membranaceus cinereo-fuscescens v. livido-fuscus, e laciniis parvis multifidis tenuibus arcte adpressis formatus. Apothecia sessilia nigro-fusca nuda, margine integro. Sporæ ovoideo-ellipsoideæ 2-cellulæ, cellulis normaliter tubulo in axi sporæ disposito junctis, fuscescentes, longit. 0.018 mm., crassit. 0.009 mm.

*Ad cortices arborum*, socia fere semper *Physciæ stellaris*.

### 4. *Physcia synthalea*, sp. n.

Thallus cinereo- vel glauco-albicans ad matricem arcte adglutinatus, tenuiter membranaceus laciniatus, laciniis fragilibus dilatis rugoso-plicatis confluentibus, apicibus varie crenatis passim pertusis, subtus concoloribus nudis. Apothecia cerino-flava mox sat fusca plana, margine thallose pallido tumido sæpissime integro. Sporæ fuscæ 4-6-loculares, loculis aut discretis aut tubulo conjunctis, nonnihil varie septatæ, longit. 0.02 mm., crassit. 0.013 mm.

*Ad cortices arborum.*

### 5. *Pannaria brunnea* var. *pulverulenta*, Knight.

Thallus cinereo-fumosus granulato-squamulosus mox in crustam pulverulento-granulosam conglobatus, hypothallo fusco-atro, granulis gonimis viridis parvis. Apothecia rufo-fuscescentia innata conferta interdum symphicarpea plana, madefacta convexa excipulo composito marginata, margine thallose tenui pulverulento-granuloso, excipulo proprio dilute colorato, textura supra radiatim disposita; hymenium hypothecio crasso strato gonimico imposito enatum, paraphysibus adglutinatis. Sporæ in ascis cylindrico-elongatis ellipsoideæ incolores, longit. 0.016 mm., crassit. 0.008 mm.

*Supra terram humidam.*

### 6. *Lecanora cyrtospora*, sp. n.

Thallus albo-cinereus tenuis minute granulosus continuus (linea atra limitatus?) apothecia scutelliformia (diam. 2 mm.) grisea pruinosa plana intus fusca excipulo mere thallose marginata, margine crasso pallido irregulariter

crenato, ex annulo interiore ornato, persistente, paraphysibus hypothecio tenui enatis, non bene discretis. Sporæ in ascis clavatis persæpe curvatæ oblongæ utrinque obtusæ simplices incolores, longit. 0·027 mm., crassit. 0·009 mm.

*Ad cortices.*

7. *Pertusaria cupularis*, sp. n.

Thallus e cinereo glauco-albicans lævigatus areolatus nonnihil appressoleprosus. Apothecia *monopyrenia* alba sparsa applanato-hemispherica *lecanoriformia*, amphithecio nullo, margine thallode crasso.—(sæpe e duobus vel pluribus annulis albis constante)—tandem *fatiscente*, disco depresso albo suffuso nonnihil nudo—(tum vitreo-griseo)—paraphysibus *paucis subtilibus ramosis*. Asci *conferti numerosi* cylindrici. Sporæ ellipsoideæ simplices uniseriales octonæ pluries limbatae, longit. 0·04 mm., crassit. 0·018 mm.

*Ad cortices.*

Allied to *Pertusaria soreciata*, Fr.

8. *Pertusaria lævis*, sp. n.

Thallus tenuis cinereo-albidus continuus v. *tenuissime reticulatus*. Apotheciorum verrucæ convexæ *pleiopyreniæ*, circa ostiola minutissima fusconigricantes *nunquam depressæ*, paraphysibus imperfectis floccoso-reticulatis, amphithecio *e matrice enato*. Sporæ in ascis cylindrico-elongatis octonæ ellipsoideæ pluries limbatae nebuloso-incolores, longit. 0·045 mm., crassit. 0·018 mm.

*Ad cortices.*

9. *Lecidea atrolurida*, sp. n.

Thallus ochro-albicans squamulosus, *squamulis minutissimis appressis*, linea atra limitatus, hypothallo nigro-lurido semi-nudo, *squamulis ipsis obsito*. Apothecia atra *minuta* (diam. circiter 0·5 mm.) mox convexa vel hemispherica, intus fusco-nigricantia, margine concolore obscuro evanescente, excipulo proprio omnino fusco-atro (lamina tenui visum) *e thallo albo oriundo* paraphysibus *ramosis* adglutinatis tandem subpatulis. Sporæ ovideæ incolores, longit. 0·01 mm., crassit. 0·007 mm.

*Ad saxa.*

Affinis est *Lecideæ fusco-rubenti*, Nyl., et *schistacæ*, Kn., sed apothecii minoribus.

10. *Lecidea* (*Bombyliospora*) *monospora*, sp. n.

Thallus olivaceus minute granuloso-squamulosus v. pulvereus. Apothecia *peltata urceolata* atra demum plana, intus luteo-fusca, margine *asperissimo* concolore, excipulo proprio *a linea nigra in epithecium producta circumscripto*, *structura non radiatim disposita*; hypothecio fusco, paraphysibus bene discretis incoloribus attamen in *pileum atrem oblongum* v. *conicum terminantibus*. Ascus *monosporus*. Sporæ *murali-divisæ* (seriebus circiter 20 transversim 7-9 locales), ellipsoideæ, longit. 0·07 mm., crassit. 0·028 mm.

*Ad cortices arborum.*

*Obs.*—Differs from *Lecid. lecanorella*, Nyl., in the spores being nearly double the size, and the transverse cells much more numerous. The blast cell at the apex of each paraphysis is remarkable.

11. *Lecidea* (*Sporastatia*) *desmaspora*, sp. n.

Thallus albo-cinereus *farinaceus*. Apothecia e thallo oriunda parva (diam. 0.5 mm.) convexa, madefacta hemispherica, disco immarginato fusco v. atro-fusco, hymenio tenui hyalino, hypothecio fusco crasso, excipulo proprio (*structura radiatim disposita*), in laminam proliqeram continuato, paraphysibus adglutinatis apice incoloratis. Sporæ in ascis clavatis *numerosissimæ minutissimæ globosæ* (diam. 0.001 mm.) *catenatæ*.

*Ad cortices arborum.*

12. *Arthonia phymatodes*, sp. n.

Thallus tenuis cinereo-viridulus, matrice rimosa fissa, *subtuberculosus*, tuberculis fertilibus convexis sparsis. Apothecia *minuta* (madefacta, diam. 0.3 mm.) e thalli tuberculis formata et marginata; disco plano *primitus strato thallino tenui tecto*, deinde partito vel omnino nudo vitreo-fuscescenteque; excipulo nullo, hypothecio simplici, paraphysibus paucis *grosse clathrato-ramosis*. Sporæ in ascis *ventricoso-clavatis* nymphæformes normaliter 5-cellulæ, cellulo supremo ampliore, incolores, longit. 0.02 mm., crassit. 0.008 mm.

*Ad cortices arborum.*

13. *Opegrapha spodoelæina*, sp. n.

Thallus hyepoplodes cinereo-olivaceus tenuissimus *continuus*, intus *gonidiis perspicuis*, *strato hypothallino cum matrice mutata commisto*. Apothecia nigra superficialia linearia (longit. 1.5 mm.) simplicia intus dilute fuscescentia, excipulo nigro, hypothecio *fusco*; epithecio incolore, paraphysibus *ramosis*. Sporæ in ascis ovoideis incolores fusiformes 6-7-septatæ, longit. 0.037 mm., crassit. 0.007 mm.

*Ad cortices arborum.*

*Obs.*—Quasi inter *Opegrapham agelæoidem*, Nyl., et *spodopolia*, Nyl., intermedia, differens ab illa thallo olivaceo, ab hac thallo continuo et hypothecio fusco.

14. *Opegrapha stellata*, sp. n.

Thallus tenuis pallide ochro-cinereus lævis *continuus*, linea atra limitatus. Apothecia lirellæformia, lirellis *elongatis angustissimis flexuoso-contortis stellatim ramosis*, *madefactis subinnatis* apertis, hymenio incolore, excipulo atro integro, paraphysibus *clathrato-ramosis*. Sporæ in ascis subpyriformibus minutæ incolores *subfusiformes* 1-3-septatæ, longit. 0.012 mm., crassit. 0.003 mm.

*Ad cortices arborum.*

Quasi inter *Opegrapham* et *Graphidem* intermedia.

15. *Opegrapha intertexta*, sp. n.

Thallus albo-cinereus tenuis lævis continuus. Apothecia madefacta *innata*, lirellæformia, lirellis *simplicibus* v. *subramosis* angustissimis rectis v. flexuoso-contortis *ipsis intermixtis*, hymenio incolore, perithecio atro *integro*, paraphysibus *clathrato-ramosis*. Sporæ in ascis *subpyriformibus* minutæ incolores subfusiformes 1–3-septatæ, longit. 0·012 mm., crassit. 0·003 mm.

*Ad cortices arborum.*

*Obs.*—Quasi inter *Opegrapham* et *Graphidem* intermedia.

16. *Graphis strigata*, sp. n.

Thallus tenuis e albo cinerascens, nitiusculus *colliculosus* v. *verrucosus*, *fissus*, interdum versus ambitum areolatus. Apothecia *palmato-divisa*, lirellis *a thallo niveo subprominente* cinctis, *apicibus attenuatis*, disco lato *albo-pruinoso*, *a lineis nigris striato*, raro nudo, tum atro; excipulo atro-fusco *lateralis*; hymenium dilute fuscum hypothecio concolore tenui enatum, paraphysibus *rectis* arcte adglutinatis *grumosis*. Sporæ in ascis cylindricis oblongæ hyalinæ 4-cellulæ, cellulis lentiformibus limbatis, mox fuscæ emortuæ collapsæ, longit. 0·02 mm., crassit. 0·008 mm.

*Ad cortices arborum.*

Arcte affinis est *Graphidi subtricosæ* (Knight, Linn. Trans., vol. ii., 1882), sed apotheciis pruinosis strigatis, et thallo passim verrucoso, quare specie differt.

17. *Graphis librata*, sp. n.

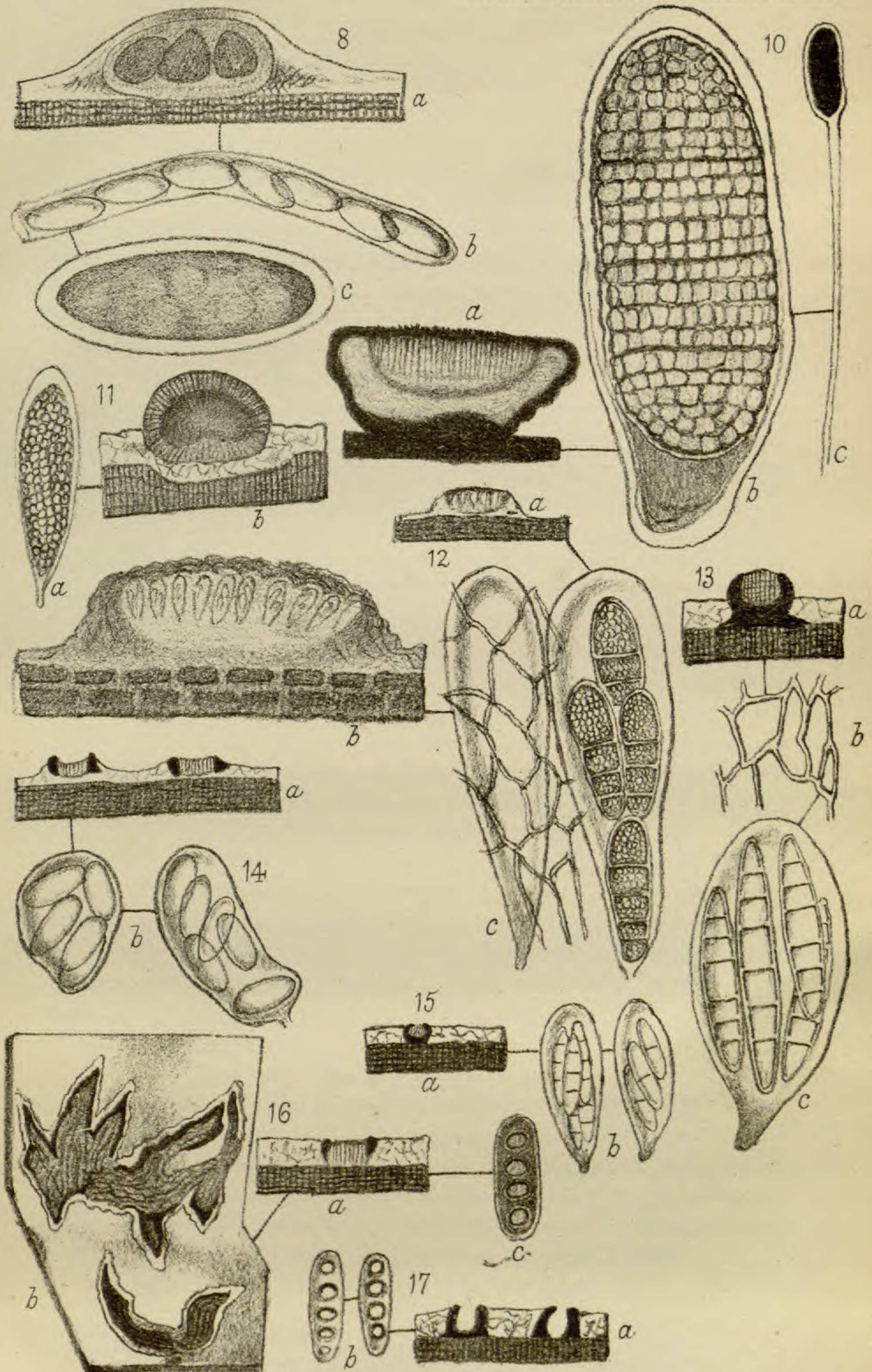
Thallus tenuis pallide fusco-ochraceus *continuus linea atra limitatus*. Apothecia atra lirellæformia angusta sæpissime *simplicia rectiuscula librata* clausa, madefacta *innata*, excipulo atro *integro* v. *subintegro*, hymenio incolore, paraphysibus distinctis *ramosis*. Sporæ oblongæ 4–5-cellulæ, cellulis lenticularibus incolores, longit. 0·017 mm., crassit. 0·006 mm.

*Ad cortices arborum.*

18. *Fissurina rugosa*, sp. n.

Thallus cinereo-olivaceus tenuissimus *rugoso-verrucosus*, verrucis *ex apothecio fissus*. Apothecia longit. circiter 1 mm. *in matrice subinflata* dilacerata immersa, flexuosa pervaga simplicia conferta, intus incoloria, marginibus thalloideis *tenuibus in latitudinem vix laxatis* (in sectione supra fuscescentibus) paraphysibus adglutinatis gracilibus apice haud coloratis. Sporæ in ascis cylindrico-elongatis ovatæ hyalinæ demum fuscescentes, normaliter uniseriales, 4-cellulæ, cellulis lenticularibus, longit. 0·018 mm., crassit. 0·009 mm.

*Ad cortices arborum.*



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C. Knight, del.

19. *Fissurina alba*, sp. n.

Thallus tenuis *albidus* subnitens inæqualis, ex apotheciis fissus, continuus, *strato gonidiale viride a corticale albo clare separato*. Apothecia flexuosa simplicia (longit. circiter 1.5 mm. vel ultra) *in matrice immersa*, intus incoloria, marginibus thalloideis tenuibus approximatis (in sectione supra fuscescentibus interdum *bicornibus*); hymenium incolor hypothecio matrice imposito enatum, paraphysibus adglutinatis apice incoloribus. Sporæ in ascis cylindrico-elongatis ovoideæ 4-cellulæ, cellulis lenticularibus, incolores tandem dilute fuscescentes, longit. 0.02 mm., crassit. 0.01 mm.

*Ad nudos arborum radices.*

20. *Trypethelium bicolor*, sp. n.

Thallus tenuissimus atrofuscus *tuberculosis*, tuberculis fusco-ochraceis nonnihil atro-fuscis, *intus ex apotheciis pluribus et matrice degenerata constantibus*; excipulum integrum carbonaceum *tenue pyriforme* v. globoso-deforme, ostiole tandem nigricante; paraphyses laxe *clathrato-ramosis*. Sporæ in ascis clavatis octonæ oblongæ 4-cellulæ (cellulis limbatis globularibus, septis interpositis inter se separatis) hyalinæ, longit. 0.02 mm., crassit. 0.0075 mm.

*Ad cortices arborum vivorum.*

Var. *pyrenuloides*. Thallus *e cinereo fuscus* subnitans passim *tuberculosis*, *maculis asperis et lineis atris aspersus*, tuberculis *atris asperis*. Apothecia *sejuncta* interdum *syncarpea*.

Obs.—Non certum est, anne *Tryp. bicolor* revera sistat Verrucariam. Ad excipulum pyriforme sporesque 4-cellules rationem similis est *Verrucaria catervaria*, Fée. Facies thalli fere sicut *Tryp. scoria*, Fée.

21. *Stigmatidium prominulum*, sp. n.

Thallus *albo-ochraceus* tenuissimus continuus. Apothecia in verrucis thallinis *minutis* convexis (latit. circiter 1.5 mm.) omnino immersa, ostiolo pertuso subprominule, amphithecio *supra fuscescente* sed parte *infera incolore* vel *evanescente*, hymenio globoso incolore, paraphysibus *floccosis*. Sporæ incolores oblongo-ovoideæ 3-septatæ, longit. 0.013 mm., crassit. 0.005 mm.

*Ad cortices arborum.*

22. *Verrucaria mycospora*, sp. n.

Thallus albo-cinereus areolato-rimosus *haud verrucosus* tenuissimus. Apothecia *minuta* (diam. 0.25 mm.) globosa *sessilia*, perithecio *integro* atro *e matrice imposito*, hymenio subtiliter floccoso dilute fuscescente, paraphysibus nullis. Sporæ *fusiformi-dactyloideæ* 5–6-septatæ hyalinæ, longit. 0.025 mm., crassit. 0.003 mm. Spermagonia *prominentia*, spermatis oblongis, longit. 0.007 mm., crassit. 0.003 mm., sterigmatibus simplicibus infixis.

*Ad cortices arborum.*



23. *Verrucaria olivaceo-fusca*, sp. n.

Thallus *olivaceo-fuscus* lævis tenuis continuus, apotheciorum verrucis *minutis atro-fuscis* convexis, ostiolo inconspicuo vix unquam pertuso. Apothecia *in matrice subimmersa* orbicularia, perithecio atro integro, hymenio pallido-fusco, paraphysibus *distinctis*. Sporæ hyalinæ mox fuscae 4-cellulæ, cellulis limbatis, longit. 0·019 mm., crassit. 0·008 mm.

*Ad cortices arborum.*

24. *Odontrema concentricum*, Stirton.

Thallus cinereo-ochraceus tenuis continuus. Apothecia matrice *imposita* a thallo leviter irregulariterque oblecta, primo clausa, perithecio *carbonaceo dimidiato ambitu recurvato* mox *dilaniato-dehiscente*, hymenio tandem concavo-discoideo; epithecium *perithecio divulso obsitum*, paraphysibus subtiliter capillaribus apice non dilatis linea fusca tenui enatis. Sporæ in ascis cylindræ incolores normaliter cylindræ obtusæ nonnihil elongato-fusiformes, circiter 12-septatæ, cellulis quaternis v. lentiformibus, longit. 0·03 ad 0·05 mm., crassit. 0·006 ad 0·009 mm.

*Ad cortices arborum.*

## EXPLANATION OF PLATES XXXIX—XLI.

## PLATE XXXIX.

- No. 1. *Pilophoron colensoi* (Bab.), Knight.  
 (a.) Section of apothecium x 38 diam.  
 (b.) Gonidia x 300 diam.  
 (c.) Granules (pseudo-gonidia) of which the medullary substance of the thalline receptacle principally consists x 900 diam.  
 (d.) Spores in ascus x 900 diam.
- No. \*1. *Stereocaulon ramulosum*.  
 Ascus and spores x 900 diam.
- No. 2. *Myriangium duricæi*, Mont. et Berk.  
 (a.) Section of carbonized torus and apothecium x 38 diam.  
 (b.) Section of portion of the above x 150 diam.  
 (c.) Section x 900 diam. showing ascus and spores in situ.
- No. 3. *Physcia synthalea*, sp. n.  
 3 spores x 900 diam.
- No. 4. *Physcia adglutinata*, Flk.  
 Ascus and spores x 900 diam.
- No. 5. *Pannaria brunnea* v. *pulverulenta*, Knight.  
 (a.) Section of apothecium x 900 diam.
- No. 6. *Lecanora cyrtospora*, sp. n.  
 (a.) Section of apothecium x 38 diam.  
 (b.) Ascus and spores x 900.
- No. 7. *Pertusaria cupularis*, sp. n.  
 (a.) Section of apothecium x 38 diam.